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PUBLIC UTILITIES COMM.  
STATE OF CALIF.

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INTERSTATE COMMERCE COMMISSION  
WASHINGTON

REPORT NO. 3617  
UNION PACIFIC RAILROAD COMPANY  
IN RE ACCIDENT  
AT SOUTH MONTESANO, WASH., ON  
MARCH 15, 1955



SUMMARY

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Date: March 15, 1955

Railroad: Union Pacific

Location: South Montesano, Wash.

Kind of accident: Rear-end collision

Trains involved: Freight : Freight

Train numbers: 306 : 308

Engine numbers: Diesel-electric unit 153 : Diesel-electric unit C.M.St. P. & P. 2402

Consists: 34 cars, caboose : 10 cars, caboose

Speeds: Standing : 20 m. p. h.

Operation: Timetable and train orders; yard limits

Track: Single; 2° curve; 0.23 percent descending grade eastward

Weather: Pockets of fog

Time: 1:18 a. m.

Casualties: 1 killed; 2 injured

Cause: Failure properly to control speed of following train moving within yard limits



INTERSTATE COMMERCE COMMISSION

REPORT NO. 3617

IN THE MATTER OF MAKING ACCIDENT INVESTIGATION REPORTS  
UNDER THE ACCIDENT REPORTS ACT OF MAY 6, 1910.

UNION PACIFIC RAILROAD COMPANY

April 21, 1955

Accident at South Montesano, Wash., on March 15, 1955,  
caused by failure properly to control the speed  
of the following train moving within yard limits.

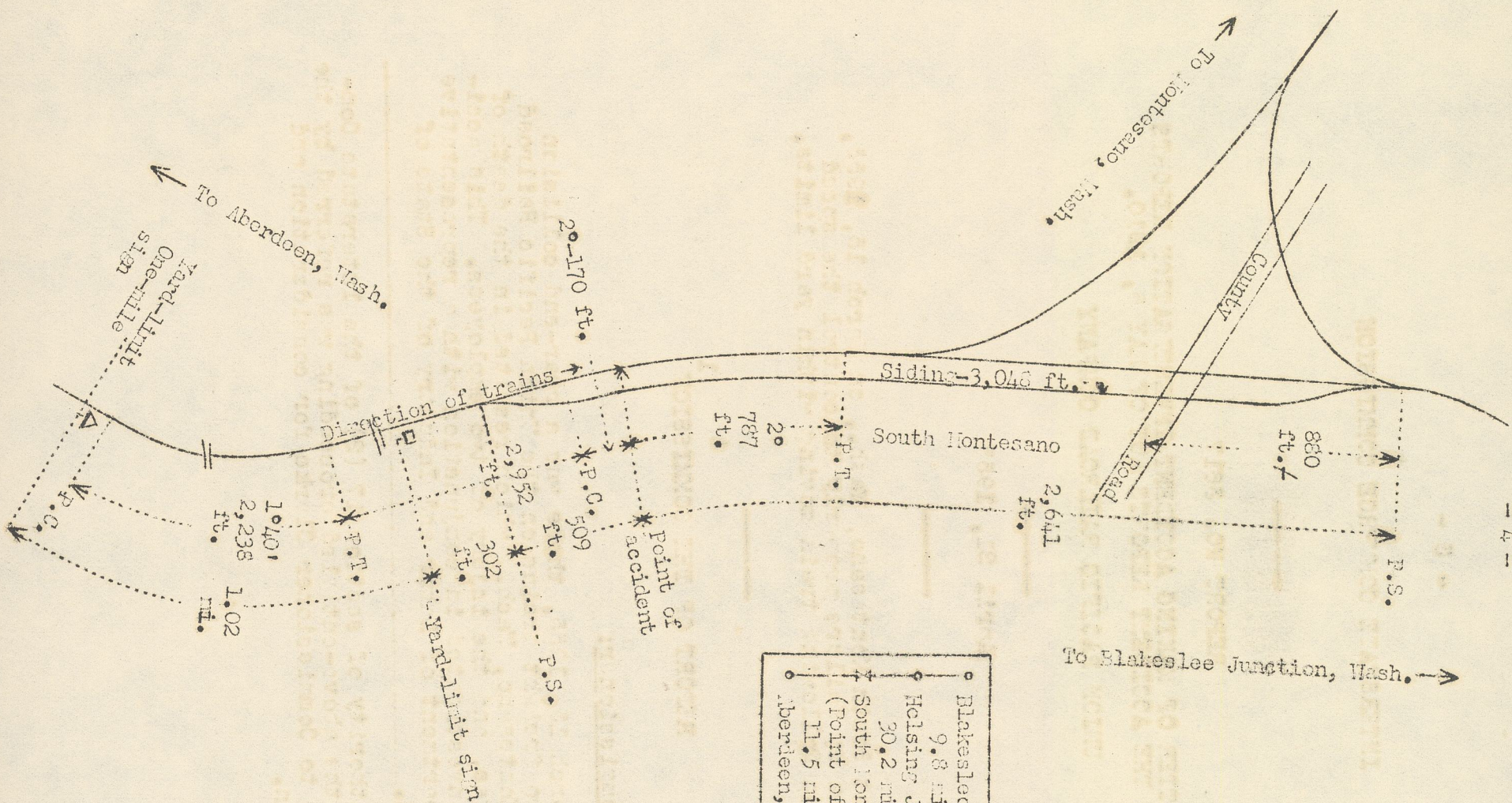
REPORT OF THE COMMISSION<sup>1</sup>

CLARKE, Commissioner:

On March 15, 1955, there was a rear-end collision between two freight trains on the Union Pacific Railroad at South Montesano, Wash., which resulted in the death of one employee, and the injury of two employees. This accident was investigated in conjunction with a representative of the Department of Labor and Industry of the State of Washington.

<sup>1</sup>  
Under authority of section 17 (2) of the Interstate Commerce Act the above-entitled proceeding was referred by the Commission to Commissioner Clarke for consideration and disposition.





Report No. 3617  
 Union Pacific Railroad  
 South Montesano, Wash.  
 March 15, 1955



Location of Accident and Method of Operation

This accident occurred on that part of the Oregon Division extending between Aberdeen and Blakeslee Junction, Wash., 51.5 miles. In the vicinity of the point of accident this is a single-track line, over which trains are operated by timetable and train orders. There is no block system in use. Trains of the Chicago, Milwaukee, St. Paul and Pacific Railroad regularly are operated over the portion of the Union Pacific extending between Aberdeen and Helsing Junction, 41.7 miles east of Aberdeen. At South Montesano, 11.5 miles east of Aberdeen, a siding 3,048 feet in length parallels the main track on the south. The west switch of this siding is 302 feet east of the west yard-limit sign. The accident occurred on the main track within yard limits at a point 811 feet east of the west yard-limit sign and 509 feet east of the west siding-switch. Within yard limits at South Montesano a wye connects the main track with a line 1.5 miles in length which extends northward to Montesano. The east switch of the wye is located in the main track 2,641 feet east of the point of accident. From the west there are, in succession, a 1°40' curve to the left 2,238 feet in length, a tangent 2,952 feet, and a 2° curve to the right 170 feet to the point of accident and 787 feet eastward. The grade for east-bound trains varies between level and 0.35 percent descending throughout a distance of 3,100 feet immediately west of the point of accident, and it is 0.23 percent descending at that point.

A triangular yard-limit one-mile sign is located 1.02 miles west of the west yard-limit sign.

This carrier's operating rules read in part as follows:

93. Within yard limits the main track may be used, protecting against first-class trains.

During foggy or stormy weather, trains and engines must provide proper flag protection \* \* \*

All trains and engines must move within yard limits prepared to stop unless the track is seen or known to be clear. \* \* \*

Note.—Limits of yards are indicated by yard limit signs and the location of yards is shown in time-table.



The maximum authorized speed for freight trains is 30 miles per hour, but it is restricted to 15 miles per hour within yard limits at South Montesano.

#### Description of Accident

No. 306, an east-bound second-class U.P. freight train, consisted of Diesel-electric unit 153, 34 cars, and a caboose. This train departed from Aberdeen, the last open office, at 10:15 p. m., March 14, 2 hours 45 minutes late, performed switching service en route, and stopped on the main track at South Montesano about 11:35 p. m. with the rear end 810 feet east of the west yard-limit sign and 509 feet east of the west siding-switch. About 1 hour 45 minutes later the rear end of the train was struck by No. 308.

No. 308, an east-bound second-class C.M.St.P. & P. freight train, consisted of Diesel-electric unit 2402, 10 cars, and a caboose. This train departed from Aberdeen at 12:45 a. m., 5 hours 25 minutes late, passed the west yard-limit sign at South Montesano, and while moving at a speed of about 20 miles per hour it struck the rear end of No. 306.

The caboose and the rear car of No. 306 were derailed, and the rear end of the second rear car was moved off center. The caboose was demolished. The rear car was badly damaged, and the second rear car was slightly damaged. No. 308 stopped with the front end of the locomotive 94 feet east of the point of collision. The south rail was overturned, and the right front wheel of the front truck of the locomotive was derailed. The front hood and the front of the control compartment were crushed inward, and the unit was considerably damaged.

The engineer of No. 308 was killed. The fireman and the front brakeman of No. 308 were injured.

The weather was hazy and there were pockets of fog at the time of the accident, which occurred at 1:18 a. m.

The caboose of No. 306 was of steel underframe construction with a wooden superstructure.

The Diesel-electric unit of No. 308 was of the road-switcher type. The control compartment was located near the front end of the locomotive.



Discussion

When No. 306 stopped at South Montesano the enginemen, the front brakeman, and the swing brakeman were on the locomotive. The conductor and the flagman were in the caboose. Immediately after the train stopped the locomotive and the first three cars were detached from the train and proceeded to Montesano. The fireman was operating the locomotive. Switching service was performed at Montesano, and three cars were assembled for the return movement. The enginemen said that visibility was good and they had no difficulty in discerning lamp signals during the switching operations and also the signals given by a bridge tender at a drawbridge on the Montesano line. All of these signals were given with white lights. The enginemen said that on the return trip to South Montesano they observed a haze or light fog but they did not think the visibility was materially restricted. The engineer said that if fog had restricted visibility at any time he would have sounded the whistle signal for the flagman to protect the rear of the train. The fireman said that when the locomotive returned to South Montesano and was in the vicinity of the east switch of the wye, the white lantern of the swing brakeman at a highway crossing about 880 feet west of the switch was clearly visible. The swing brakeman stated that while he was at this crossing he observed the reflection of the headlight of the locomotive of No. 308, and soon afterward he heard the sound of the collision.

The conductor and the flagman of No. 306 remained with the rear portion of the train. The markers at the rear of the caboose were lighted and displayed red to the rear, and an additional red light was displayed between the markers. Because of track curvature and an embankment adjacent to the siding the forward end of the train was not visible from the caboose. Soon after the locomotive departed the flagman inspected the forward portion of the train and then returned to the caboose. The conductor said that he left the caboose several times and observed that the weather was becoming hazy. He said that visibility was not materially restricted by this haze and that lights at the drawbridge on the Montesano line, which he estimated was more than 1,600 feet distant, were clearly visible from the caboose. Under these circumstances he did not consider it necessary to provide flag protection within yard limits. He said that when No. 308 was approximately 1 mile distant he heard the locomotive whistle sounded and observed the reflection of the headlight. Soon afterward he observed the headlight on the tangent to the rear of the caboose. When the speed of the approaching train was not reduced he became concerned and



left the caboose and lighted a fusee. As No. 308 continued to approach with no apparent reduction in speed he warned the flagman and then ran westward giving stop signals with the lighted fusee. These signals were not acknowledged. He said that he had reached a point approximately 200 feet to the rear of the caboose when the locomotive of No. 308 passed him. He estimated that the speed of the train was about 25 miles per hour, and he did not think it was reduced before the collision occurred.

As No. 308 was approaching the point where the accident occurred the speed was about 35 miles per hour, as indicated by the tape of the speed-recording device. The enginemen and the front brakeman were maintaining a lookout ahead from the control compartment of the locomotive. The conductor and the flagman were in the caboose. The headlight was lighted brightly. The brakes of this train had been tested and had functioned properly when used en route. The surviving members of the crew said that pockets of fog had been encountered at many points en route and that as their train approached South Montesano visibility was materially restricted by fog. All understood that within yard limits their train was required to be operated prepared to stop, and they estimated that it was moving at a speed of about 15 miles per hour. The members of the crew on the locomotive called the location of the yard-limit one-mile sign, and the fireman said that the engineer also called the location of the yard-limit sign. The front brakeman and the fireman said that the engineer initiated a service application of the brakes in the vicinity of the yard-limit sign and soon afterward they observed a lighted fusee and the rear end of the preceding train. They called a warning, and the engineer then moved the brake valve to emergency position. The conductor said that the brakes were applied in emergency a few seconds before the collision occurred and that a service application did not precede this application. He said that immediately after the accident occurred he alighted from the caboose and observed that the fog was quite dense and visibility was restricted. He said that the fusee displayed by the conductor of the preceding train was not visible to him until he had walked forward the length of two or three cars from his caboose.

The brakes of the cars of No. 308 were tested at the scene of the accident several hours after the accident occurred. This test disclosed that all brakes were operative, but the piston travel of the first, second, sixth, and tenth cars was excessive. Examination of the tape of the speed-recording device disclosed that the speed was 35 miles per hour at the time the brake application which was made immediately before the accident occurred became effective, and it was reduced to about 20 miles per hour at the point of collision.



This accident occurred within yard limits. The rules of this carrier governing the operation of trains within yard limits require that all trains and engines move prepared to stop unless the track is seen or known to be clear and that during foggy or stormy weather all trains and engines must provide proper flag protection. The surviving members of the crew of No. 308 stated that pockets of fog had been encountered en route and that visibility in the vicinity of the point of accident was materially restricted by fog. The members of the crew of No. 306 said that the fog or haze conditions which prevailed were not of sufficient density to interfere with transmission of lamp signals during switching operations, and they did not consider flag protection necessary. The rules required that regardless of weather conditions No. 308 be operated in such manner that it could be stopped short of a preceding train even though flag protection was not provided for that train.

Cause

This accident was caused by failure properly to control the speed of the following train moving within yard limits.

Dated at Washington, D. C., this twenty-first day of April, 1955.

By the Commission, Commissioner Clarke.

(SEAL)

HAROLD D. McCOY,  
Secretary.



This accident occurred within yard limits. The rules of this carrier governing the operation of trains within yard limits require that all trains and engines be stopped at the main track in case of known or suspected danger. During heavy or stormy weather all trains and engines must provide proper flag protection. The committee members of the crew of No. 308 stated that because of fog had been encountered en route and that visibility in the vicinity of the point of accident was materially restricted by fog. The members of the crew of No. 308 said that the fog or haze conditions which prevailed were not of sufficient density to interfere with the operation of lamp signals during switching operations and they did not consider flag protection necessary. The rules required that regardless of weather conditions No. 308 be operated in such manner that it could be stopped east of a crossing train even though flag protection was not provided for that train.

#### Witness

This accident was caused by failure properly to control the speed of the following train moving within yard limits.

Filed at Washington, D. C., this twenty-first day of April, 1938.

By the Commission, Commissioner Dinkels.

HAROLD D. WOOD,

Secretary.

(SIX)